

REMARKS

Claims 1 – 17 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

CONTACT WITH THE EXAMINER

Applicants thank the Examiner for courtesy extended during a telephone conversation on January 24, 2005. During the telephone conversation, the Examiner stated that the objections to the Drawings would be overcome by adding labels to boxes in Figure 1 and Figure 2.

OBJECTIONS TO THE DRAWINGS

The drawings stand objected to for certain informalities. Applicants have attached revised drawings for the Examiner's approval. In Replacement Sheet 1 of 4 and 2 of 4, the boxes that were identified by the Examiner were labeled per the specification. No new matter has been entered.

REJECTION UNDER 35 U.S.C. § 102

Claims 1 – 17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by McGaughey et al., United States Patent Number 6,708,134, hereinafter McGaughey. This rejection is respectfully traversed.

With respect to Claim 1, McGaughey fails to show, teach or suggest comparing a received motor speed data to predetermined motor speed ranges, determining a motor speed range based on the comparison, and modulating an inverter switching frequency of a motor controller processor based on the determined motor speed range.

As best understood by Applicants, McGaughey does not employ motor speed ranges to modulate inverter switching frequency. McGaughey states that one of the sub-harmonic frequencies is compared to the Harmonic Speed Model to locate two separate frequency regions where corresponding harmonics f_1 and f_2 would have to be in order to make a pattern match with the Harmonic Speed

Model 314. McGaughey matches detected discrete sub-harmonics to the speed harmonic model to estimate the motor speed. (Column 13, Lines 5 – 35)

The Examiner incorrectly asserts that “The frequency comparing and the frequency regions are considered as the speed ranges as recited by claims.” Applicants respectfully request further clarification on this issue. Nevertheless, Applicants respectfully submit that McGaughey does not support the Examiner’s conclusion. McGaughey looks to match a sub-harmonic pattern by monitoring certain frequency regions. By matching the sub-harmonic pattern, McGaughey estimates motor speed. To increase the efficiency of the pattern matching, McGaughey only looks in certain frequency regions in an attempt to match the sub-harmonic pattern. These regions are not the equivalent of or even related to the claimed predetermined motor speed ranges. The regions contain sub-harmonic artifacts of the sub-harmonic pattern that McGaughey relies upon to identify a discrete speed.

For the foregoing reasons, Applicants submit that Claim 1 is allowable. Claims 9 and 17 are allowable for at least similar reasons. Moreover, Claims 2 – 7 depend on Claim 1 and Claims 10 – 15 depend upon Claim 9 and are allowable for at least similar reasons.

REJECTION UNDER 35 U.S.C. § 103

Claims 8 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McGaughey in view of Okachi et al., United States Patent Number 5,459,386, hereinafter Okachi. This rejection is respectfully traversed.

With respect to the above discussion, Claims 8 and 16 depend upon Claims 1 and 9 and therefore are allowable for at least similar reasons.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed and accommodated. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections and objections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at 313-665-4969.

If for some reason a fee needs to be paid please charge Deposit Account No. 07-0960 for the fees, which may be due.

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Respectfully submitted,

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AMENDMENTS TO THE DRAWINGS

The attached "Replacement Sheets" of drawings include changes to Figure 1 and Figure 2. The changes to the drawings include adding labels to the boxes, as described by the Examiner.

Attachment: Replacement Sheet 1 of 4 and 2 of 4.